JIS G3112

Chemical composition

Symbol of grade	Chemical composition %					
	C	Si	Mn	P	S	$C + \frac{Mn}{6}$
SR 235	—	—	—	0.050 max.	0.050 max.	—
SR 295	—	—	—	0.050 max.	0.050 max.	—
SD 295 A	—	—	—	0.050 max.	0.050 max.	—
SD 295 B	0.27 max.	0.55 max.	1.50 max.	0.040 max.	0.040 max.	—
SD 345	0.27 max.	0.55 max.	1.60 max.	0.040 max.	0.040 max.	0.50 max.
SD 390	0.29 max.	0.55 max.	1.80 max.	0.040 max.	0.040 max.	0.55 max.
SD 490	0.32 max.	0.55 max.	1.80 max.	0.040 max.	0.040 max.	0.60 max.

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Mechanical properties

Symbol of grade	Yield point or 0.2 % proof stress N/mm²	Tensile strength N/mm²	Tensile test piece	Elongation (2) %	Bendability	
					Bend angle	Inside radius
SR 235	235 min.	380 to 520	No. 2	20 min.	180°	1.5 × Nominal diameter
			No. 3	24 min.		
SR 295	295 min.	440 to 600	No. 2	18 min.	180°	Diameter up to and incl. 16 mm 1.5 × nominal diameter
			No. 3	20 min.		Diameter over 16 mm 2 × nominal diameter
SD 295 A	295 min.	440 to 600	Equivalent to No. 2	16 min.	180°	Up to and incl. D 16 1.5 × nominal diameter
			Equivalent to No. 3	18 min.		Over D 16 2 × nominal diameter
SD 295 B	295 to 390	440 min.	Equivalent to No. 2	16 min.	180°	Up to and incl. D 16 1.5 × nominal diameter
			Equivalent to No. 3	18 min.		Over D 16 2 × nominal diameter
SD 345	345 to 440	490 min.	Equivalent to No.2	18 min.	180°	Up to and incl. D 16 1.5 × nominal diameter
						Over D 16, up to and incl. D 41 2 × nominal diameter
			Equivalent No. 3	20 min.		D 51 2.5 × nominal diameter
SD 390	390 to 510	560 min.	Equivalent to No. 2	16 min.	180°	2.5 × Nominal diameter
			Equivalent to No. 3	18 min.		
SD 490	490 to 625	620 min.	Equivalent to No. 2	12 min.	90°	Up to and incl. D 25 2.5 × nominal diameter
			Equivalent to No. 3	14 min.		Over D 25 3 × nominal diameter